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Michael J. Otto

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EXAMINER

MCAVOY, ELLEN M

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/792,056
Filing Date: March 03, 2004
Appellant(s): OTTO ET AL.

Paula Morris
For Appellants

EXAMINER'S ANSWER

This is in response to the appeal brief filed 16 April 2009 and the amended appeal brief filed 02 June 2009 appealing from the Office action mailed 15 December 2009.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

Art Unit: 1797

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellants' statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellants' statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,658,860	CLARK et al	8-1997
6,403,537	CHESSER et al	6-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 193-221 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al (5,658,860) alone, or in combination with Chesser et al (6,403,537).

Clark et al [“Clark”] disclose a well fluid emulsion having a water phase and an oil phase of a sulfurized alcohol and a naturally occurring fat, oil or derivatives thereof. Clark also discloses a method of lubricating drilling equipment used in conjunction with the drilling. Suitable naturally occurring fats and oils may be obtained from vegetable oils such as castor oil, coconut oil, corn oil, cottonseed oil, olive oil and sunflower oil. The preferred class of alcohols are glycols and polyglycols having a molecular weight in the range of about 200 to about 2000. See column 3, line 39 to column 4, line 21. Suitable fatty acids include those having a carbon chain length of 8-30 carbon atoms. Clark teaches that derivatives of the fatty acids may be used including alkali metal derivatives. However, Clark additionally discloses that the derivatives include alkaline earth metals, transition metals, oxidized fatty acids, amides of fatty acids, salts of fatty acids, esters of fatty acids, etc. See column 5, lines 37-58. The examiner is of the position that although the suitable derivatives of fatty acids disclosed in the prior art is large, it is nevertheless finite, and that alkali metal fatty acids are taught as suitable. Thus the examiner maintains the position that the drilling fluid of Clark clearly meets the limitations of most of the above rejected claims. Appellants’ open-ended claim language “comprising” allows for the addition of other additives to the drilling fluid such as those set forth in Clark. Appellants’ invention differs in claims 202-210 and 218-220 by adding one or more monomers comprising acrylamide to the drilling fluid system. However, Chesser et al [“Chesser”] is added to teach that

Art Unit: 1797

drilling fluid systems conventionally contain acrylamide monomers. Having the prior art references before the inventors at the time the invention was made it would have been obvious to have added the acrylamide monomers of Chesser to the drilling fluids of Clark if the known imparted properties were so desired. It is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, here as drilling fluids, in order to form a third composition to be used for the very same purpose.... “[T]he idea of combining them flows logically from their having been individually taught in the prior art.” *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

(10) Response to Argument

Appellants’ independent claims are drawn towards a method of providing extreme pressure lubrication of drilling equipment during drilling operations which comprises the steps of (A) providing a drilling fluid system and (B) drilling through a subterranean formation using the drilling fluid system. The drilling fluid system “comprises” a continuous phase “comprising” as an integral component a dispersion “comprising” a quantity of insoluble fatty acid soap particles. Appellants argued that the examiner has not established that insoluble low valence fatty acid soap particles were known to be useful in drilling fluid systems for any particular purpose. This is not deemed to be persuasive because it is not clear that the claimed “insoluble fatty acid soap particles comprising alkali metal selected from the group consisting of lithium, potassium, rubidium, cesium, and combinations thereof” differs from the prior art to Clark. It has been established that patent claims are read in the light of the specification, and appellants teach in the

Art Unit: 1797

specification on pages 5-6 that the “fatty acid in the metal soap comprises saturated or unsaturated monocarboxylic acid compounds having the following general structure:



wherein R is selected from the group consisting of alkyl groups and alkenyl groups having from about 10 to about 28 carbon atoms, preferably from about 16 to about 24 carbon atoms”. And that “examples of suitable fatty acids include, but are not necessarily limited to tall oil fatty acids, stearic acids, palmitic acids, oleic acids, and fatty acids derived from castor oil, coconut oil, cotton-seed oil, rice oil, soybean oil, lard oil, rosin acids, tall oils, and the like, and combinations thereof.” As set forth above, Clark teaches that the well fluid emulsion comprises a naturally occurring fat, oil or derivatives thereof, and that suitable naturally occurring fats and oils may be obtained from vegetable oils such as castor oil, coconut oil, corn oil, cottonseed oil, olive oil and sunflower oil. Clark also teaches that suitable fatty acids include those having a carbon chain length of 8-30 carbon atoms, preferably a carbon chain length in the range of about 14 to about 22 carbon atoms, and that derivatives of the fatty acids include alkali metal derivatives. So the examiner maintains the position that the alkali metal derivatives of fatty acids of the prior art reference to Clark meet the limitations of the alkali metal fatty acid soap component of the claims. Although the fatty acid component of Clark is not taught as “insoluble”, the components of the invention and of Clark are seen to be the same so the fatty acids of Clark must also be insoluble.

Appellants argue that the prior art teaches away from the claimed method for providing extreme pressure lubrication. This is not deemed to be persuasive because the term “extreme pressure lubrication” occurs in the preamble. As set forth in MPEP 2111.02, the determination

Art Unit: 1797

of whether a preamble limits a claim is made on a case-by-case basis ... and that it has been held that the claim preamble, when read in the context of the entire claim, recites limitations of the claim, or, if the claim preamble is necessary to give life, meaning, and vitality to the claim, then the claim preamble should be construed as if in the balance of the claim. However, if the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction. See *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165-66 (Fed. Cir. 1999).

Further, appellants argue that the claims are directed to a method of providing extreme pressure lubrication of drilling equipment during drilling operations which differs from Clark which teaches friction reduction. This is not deemed to be persuasive because the claimed additives are seen to be the same as Clark and Chesser and the method of use as a drilling fluid is seen to be the same as Clark and Chesser. Although the property of extreme pressure lubrication is not set forth in Clark and Chesser, it has been held that the discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer. *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999). Thus the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. *In re Best*, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977).

Appellants argue that the examiner has not pointed to any teaching or suggestion that a dispersion of the claimed insoluble low valence fatty acid soap particles would remain thermally

Art Unit: 1797

stable at increased temperatures of 250°F (121°C), 300°F (148°C), or even 450°F (232°C) as set forth in the dependent claims. Appellants argue that the examiner has also not pointed to a teaching that the claimed insoluble low valence fatty acid soap particles would react with metal surfaces under appropriate conditions. This is not deemed to be persuasive because the claimed insoluble low valence (meaning alkali metal) fatty acid soap particles of the claims are seen to be indistinguishable from the fatty acid component disclosed in Clark, and Clark also teaches their use as additives to drilling fluids where, during operation in a subterranean well, drilling temperatures presumably reach the same claimed high temperatures. And, as previously set forth, Clark claims in claim 1 that the drilling fluid is contacted with the surface of the drilling equipment “to provide an interface on the equipment surface”.

In regards to the combination of Clark and Chesser, appellants also argue that the examiner has not established that the claims are directed merely to the predictable use of prior art elements according to their established functions; nor has the examiner established an apparent reason to combine known elements in the fashion claimed. As previously set forth, Clark teaches drilling fluid compositions and Chesser teaches drilling fluid compositions. It has been held that it is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, here as drilling fluids, in order to form a third composition to be used for the very same purpose, here as drilling fluids. As recently instructed by the Supreme Court, when a claim defines a combination of elements known in the prior art, the combination must do more than yield a predictable result. *KSR Int’l. Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1740 (2007). Thus the examiner maintains the position that it is appellants’ burden of proof to demonstrate that a drilling fluid composition containing both the alkali metal

Art Unit: 1797

fatty acid soap of Clark and the acrylamide monomers of Chesser does more than yield the predictable result of a drilling fluid composition containing the attendant functions of each additive.

Appellants argue that the Otto Declaration under 37 C.F.R. 1.132 submitted 16 February 2009 establishes that in fluids containing “one or more polymers comprising one or more monomers comprising acrylamide” in combination with the prior art EP lubricant “LUBRI-FILM” created “an abnormal increase in mud viscosity”, and that the examiner has not pointed to any teaching or suggestion in Clark or Chesser of this viscosification problem, nor that the problem could be solved using insoluble fatty acid soap particles comprising alkali metal as an EP lubricant. This is not deemed to be persuasive because the facts in the Declaration are not commensurate in scope with the claims. For instance, independent claims 193, 197 and 211 do NOT contain one or more polymers comprising one or more monomers comprising acrylamide. Thus the viscosification problem of such polymers is not an issue. Further, the Declaration uses one insoluble fatty acid soap particle, namely lithium stearate, and the claims are not so limited. The claims broadly contain “a quantity of insoluble fatty acid soap particles comprising alkali metal selected from the group consisting of lithium, potassium, rubidium, cesium and combinations thereof”. It has not been demonstrated that all such insoluble fatty acid soap particles will function similarly. Further, the examiner is of the position that no actual data has been presented in the Declaration and that any improvement reported therein is seen to be subjective.

Art Unit: 1797

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Ellen M McAvoy/
Primary Examiner, Art Unit 1797

Conferees:

/Glenn A Caldarola/
Acting SPE of Art Unit 1797

/Anthony McFarlane/